



IAP7 Rec'd PCT/PTO 08 FEB 2006 PCT

PATENT  
Customer No. 22,852  
Attorney Docket No. 3715.0151-00

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
)  
Philippe SANSONETTI et al. ) Group Art Unit: Unassigned  
)  
Application No.: 10/551,040 ) Examiner: Unassigned  
)  
Int'l. Filing Date: March 29, 2004 )  
)  
For: A METHOD FOR MODULATING )  
NOD1 ACTIVITY, USE OF A MTP )  
RELATED MOLECULE FOR )  
MODULATING NOD1 ACTIVITY, )  
AND THERAPEUTIC )  
APPLICATIONS THEREOF )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)**

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents on the attached listing. This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application.

Copies of the listed foreign and non-patent literature documents are attached.  
Copies of the U.S. patent publications are not enclosed.

Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicants determines that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

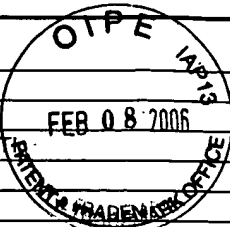
If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.  
*William B. Reich Reg. No. 54,386*

Dated: February 8, 2006

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IDS Form PTO/SB/08: Substitute for form 1449A/PTO			<b>Complete if Known</b> 		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)			Application Number	10/551,040	
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			Examiner Name	Unassigned	
Sheet	1	of	3	Attorney Docket Number	3715.0151-00

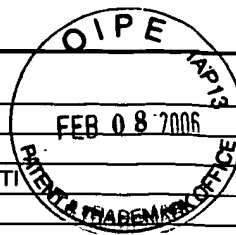
U.S. PATENTS AND PUBLISHED U.S. PATENT APPLICATIONS					
Examiner Initials	Cite No. <sup>1</sup>	Document Number	Issue or Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US-2002/0197693	12/26/2002	Bertin	

**Note: Submission of copies of U.S. Patents and published U.S. Patent Applications is not required.**

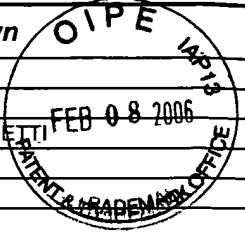
FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Translation <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation <sup>6</sup>
		PCT/IB2004/001318 International Preliminary Report on Patentability, mailed October 13, 2005	
		AKIRA et al., "Toll-like receptors: critical proteins linking innate and acquired immunity", <i>Nature Immunology</i> , Vol. 2, No. 8, pp. 675-680 (2001)	
		ASKEW et al., "Molecular Recognition with Convergent Functional Groups. 6. Synthetic and Structural Studies with a Model Receptor for Nucleic Acid Components", <i>J. Am. Chem. Soc.</i> , Vol. 111, pp. 1082-1090 (1989)	
		BERTIN et al., "Human CARD4 Protein Is a Novel CED-4/Apaf-1 Cell Death Family Member That Activates NF-κB", <i>The Journal of Biological Chemistry</i> , Vol. 274, No. 19, pp. 12955-12958 (1999)	
		BLACKBURN et al., "Identification of Four Families of Peptidoglycan Lytic Transglycosylases", <i>Journal of Molecular Evolution</i> , Vol. 52, pp. 78-84 (2001)	
		CARBALLO et al., "Elucidation of the structure of an alanine-lacking core tetrasaccharide trisphosphate from the lipopolysaccharide of <i>Pseudomonas aeruginosa</i> mutant H4", <i>Eur. J. Biochem.</i> , Vol. 261, pp. 500-508 (1999)	
		CHIN et al., "Involvement of receptor-interacting protein 2 in innate and adaptive immune responses", <i>Nature</i> , Vol. 416, pp. 190-194 (2002)	
		CHOE et al., "Requirement for a Peptidoglycan Recognition Protein (PGRP) in Relish Activation and Antibacterial Immune Responses in <i>Drosophila</i> ", <i>Science</i> , Vol. 296, pp. 359-362 (2002)	
		DE JONGE et al., "Peptidoglycan Composition of a Highly Methicillin-resistant <i>Staphylococcus aureus</i> Strain", <i>The Journal of Biological Chemistry</i> , Vol. 267, No. 16, pp. 11248-11254 (1992)	
		ECKMANN et al., "Analysis by High Density cDNA Arrays of Altered Gene Expression in Human Intestinal Epithelial Cells in Response to Infection with the Invasive Enteric Bacteria <i>Salmonella</i> ", <i>The Journal of Biological Chemistry</i> , Vol. 275, No. 19, pp. 14084-14094 (2000)	
		GIRARDIN et al., "CARD4/NOD1 mediates NF-κB and JNK activation by invasive <i>Shigella flexneri</i> ", <i>EMBO Reports</i> , Vol. 2, No. 8, pp. 736-742 (2001)	
		GIRARDIN et al., "Nod2 Is a General Sensor of Peptidoglycan through Muramyl Dipeptide (MDP) Detection", <i>The Journal of Biological Chemistry</i> , Vol. 278, No. 11, pp. 8869-8872 (2003)	
		GIRARDIN et al., "Peptidoglycan Molecular Requirements Allowing Detection by Nod1 and Nod2", <i>The Journal of Biological Chemistry</i> , Vol. 278, No. 43, pp. 41702-41708 (2003)	

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			Art Unit	Unassigned	
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NON PATENT LITERATURE DOCUMENTS			
		GLAUNER, "Separation and Quantification of Muropeptides with High-Performance Liquid Chromatography", <i>Analytical Biochemistry</i> , Vol. 172, pp. 451-464 (1988)	
		GOTTAR et al., "The <i>Drosophila</i> immune response against Gram-negative bacteria is mediated by a peptidoglycan recognition protein" <i>Nature</i> , Vol. 416, pp. 640-644 (2002)	
		HAYASHI et al., "A Rapid Determination of Sodium Dodecyl Sulfate with Methylene Blue", <i>Analytical Biochemistry</i> , Vol. 67, pp. 503-506 (1975)	
		HAYASHI et al., "The innate immune response to bacterial flagellin is mediated by Toll-like receptor 5", <i>Nature</i> , Vol. 410, pp. 1099-1103 (2001)	
		HÖLTJE et al., "Growth of the Stress-Bearing and Shape-Maintaining Murein Sacculus of <i>Escherichia coli</i> ", <i>Microbiology and Molecular Biology Reviews</i> , Vol. 62, No. 1, pp. 181-203 (1998)	
		HUGOT et al., "Association of NOD2 leucine-rich repeat variants with susceptibility to Crohn's disease", <i>Nature</i> , Vol. 411, pp. 599-603 (2001)	
		INOHARA et al., "An Induced Proximity Model for NF- $\kappa$ B Activation in the Nod1/RICK and RIP Signaling Pathways", <i>The Journal of Biological Chemistry</i> , Vol. 275, No. 36, pp. 27823-27831 (2000)	
		INOHARA et al., "Host Recognition of Bacterial Muramyl Dipeptide Mediated through NOD2", <i>The Journal of Biological Chemistry</i> , Vol. 278, No. 8, pp. 5509-5512 (2003)	
		INOHARA et al., "Human Nod1 Confers Responsiveness to Bacterial Lipopolysaccharides", <i>The Journal of Biological Chemistry</i> , Vol. 276, No. 4, pp. 2551-2554 (2001)	
		INOHARA et al., "Nod1, an Apaf-1 like Activator of Caspase-9 and Nuclear Factor $\kappa$ B" <i>The Journal of Biological Chemistry</i> , Vol. 274, No. 21, pp. 14560-14567 (1999)	
		KAWAI et al., "Unresponsiveness of MyD88-Deficient Mice to Endotoxin", <i>Immunity</i> , Vol. 11, pp. 115-122 (1999)	
		KOBAYASHI et al., "RICK/Rip2/CARDIAK mediates signalling for receptors of the innate and adaptive immune systems", <i>Nature</i> , Vol. 416, pp. 194-199 (2002)	
		LEE et al., "Two Lipoproteins Extracted from <i>Escherichia coli</i> K-12 LCD25 Lipopolysaccharide Are the Major Components Responsible for Toll-Like Receptor 2-Mediated Signaling", <i>The American Association of Immunologies</i> , Vol. 168, pp. 4012-4017 (2002)	
		LEMAITRE et al., "The Dorsal/ventral Regulatory Gene Cassette <i>spätzle/Toll/cactus</i> Controls the Potent Antifungal Response in <i>Drosophila</i> Adults", <i>Cell</i> , Vol. 86, pp. 973-983 (1996)	
		LEWIS et al., "Automated site-directed drug design: the concept of spacer skeletons for primary structure generation" <i>Proc. R. Soc. Lond.</i> , Vol. B236, pp. 125-140 (1989)	
		LEWIS et al., "Automated site-directed drug design: the formation of molecular templates in primary structure generation", <i>Proc. R. Soc. Lond.</i> , Vol. B236, pp. 141-162 (1989)	
		MCKINLAY et al., "Rational Design of Antiviral Agents", <i>Ann. Rev. Pharmacol. Toxicol.</i> , Vol. 29, pp. 111-122 (1989)	
		MCLAUGHLAN et al., "Molecular characterization of an autolytic amidase of <i>Listeria monocytogenes</i> EGD", <i>Microbiology</i> , 144, pp. 1359-1367 (1998)	
		MEDZHITOV, "Toll-Like Receptors And Innate Immunity", <i>Nature Immunology</i> , Vol. 1, pp. 135-145 (2001)	
		MICHEL et al., " <i>Drosophila</i> Toll is activated by Gram-positive bacteria through a circulating peptidoglycan recognition protein", <i>Nature</i> , Vol. 414, pp. 756-759 (2001)	
		OGURA et al., "A frameshift mutation in NOD2 associated with susceptibility to Crohn's disease", <i>Nature</i> , Vol. 411, pp. 603-606 (2001)	
		OGURA et al., "Nod2, a Nod1/Apaf-1 Family Member That Is Restricted to Monocytes and Activates NF- $\kappa$ B", <i>The Journal of Biological Chemistry</i> , Vol. 276, No. 7, pp. 4812-4818 (2001)	
		PÉDRON et al., "The Invasive Phenotype of <i>Shigella flexneri</i> Directs a Distinct Gene Expression Pattern in the Human Intestinal Epithelial Cell Line Caco-2", <i>The Journal of Biological Chemistry</i> , Vol. 278, No. 36, pp. 33878-33886 (2003)	
		PERRY et al., "The Use of 3D Modelling Databases for Identifying Structure Activity Relationships", <i>Quantitative Structure-Activity Relationships in Drug Design</i> , pp. 189-193 (1989)	
		PHILPOTT et al., "Invasive <i>Shigella flexneri</i> Activates NF- $\kappa$ B Through a Lipopolysaccharide-Dependent Innate Intracellular Response and Leads to IL-8 Expression in Epithelial Cells", <i>The American Association of Immunologists</i> , Vol. 165, pp. 903-914 (2000)	
		RÄMET et al., "Functional genomic analysis of phagocytosis and identification of a <i>Drosophila</i> receptor for <i>E. coli</i> " <i>Nature</i> , Vol. 416, pp. 644-648 (2002)	
		RIPKA, "Computers picture the perfect drug", <i>New Scientist</i> , pp. 54-58 (1988)	

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		ROUVINEN et al., "Computer-Aided Drug Design", <i>Acta Pharmaceutica Fennica</i> , Vol. 97, pp. 159-166 (1988)	
		UEHARA et al., "Identification of MpaA, an Amidase in <i>Escherichia coli</i> That Hydrolyzes the $\gamma$ -D-Glutamyl-meso-Diaminopimelate Bond in Murein Peptides", <i>Journal of Bacteriology</i> , Vol. 185, No. 2, pp. 679-682 (2003)	

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.